CONTENTS OF VOLUME 39

NUMBER 1

S. R. Turnbull and D. Dawson	1	The securing of rigid semi-trailers on roll-on/roll-off ships
M. Bijak-Żochowski and P. Marek	15	Residual stress in some elasto-plastic problems of rolling contact with friction
O. K. Bedair	33	Influence of stiffener location on the stability of stiffened plates under compression and in-plane bending
Z. L. Kowalewski and M. Śliwowski	51	Effect of cyclic loading on the yield surface evolution of 18G2A low-alloy steel
V. P. W. Shim and K. Y. Yap	69	Static and impact crushing of layered foam–plate systems
V. Pauk and A. Yevtushenko	87	Periodical contact problems for a half-space involving frictional heating
P. G. Young and S. M. Dickinson	97	Natural frequencies of vibration of a class of solids composed of layers of isotropic materials
K. Chung, F. Barlat, J. C. Brem, D. J. Lege and O. Richmond	105	Blank shape design for a planar anisotropic sheet based on ideal forming design theory and FEM analysis
W. Johnson	121	In support of Todhunter: *Euclid and his Modern Rivals* by Charles Lutwidge Dodgson (1832–1898) alias Lewis Carroll
Calendar	129	
Corrigendum	131	
Announcement	133	

NUMBER 2

Guest Editorial	135	
M. B. Adams, O. Miyagawa, A. Daugela and H. Fujii	137	Force dispersion and shock damping mediated by close-packed arrays of distally connected cells
P. C. Miscow F. and H. A. Al-Qureshi	147	Mechanics of static and dynamic inversion processes
P. Stanley and C. Garroch	163	Improvements in the prediction and characterization of the thermoelastic response of glass-fibre reinforced composite products
D. F. Quinn, P. J. Connolly, M. A. Howe and P. E. McHugh	173	Simulation of void growth in WC–Co hardmetals using crystal plasticity theory

A. K. Tieu and I. S. Kim	185	Simulation of the continuous casting process by a mathematical model
L. Carrino and G. Giuliano	193	Modelling of superplastic blow forming
S. L. Wang and K. P. Rao	201	An upper-bound analysis of friction in metal forming
W. S. Weroński, A. Gontarz and Zb. Pater	211	Analysis of the drop forging of a piston using slip-line fields and FEM
A. Piela	221	Analysis of the metal flow in swaging—numerical modelling and experimental verification
Zb. Pater	233	Theoretical method for estimation of mean pressure on contact area between rolling tools and workpiece in cross wedge rolling processes
Calendar	245	
Announcement	247	

NUMBER 3

A. A. Singace and H. El-Sobky	249	Behaviour of axially crushed corrugated tubes
R. J. Hung and H. L. Pan	269	Effect of baffles on orbital accelerations–induced bubble oscillations in microgravity
Yeong-Maw Hwang and Gow-Yi Tzou	289	Analytical and experimental study on asymmetrical sheet rolling
D. Prall and R. S. Lakes	305	Properties of a chiral honeycomb with a Poisson's ratio of -1
K. Kaliński	315	The finite element method application to linear closed loop steady system vibration analysis
Yiu Wing Chan	331	Non-contact study of mechanical contact problem using TV-holographic interferometry
N. R. Chitkara and M. A. Butt	341	Axi-symmetric tube extrusion through a flat-faced circular die: numerical construction of slip-line fields and associated velocity fields
Calendar	367	
Announcements	I	

NUMBER 4

D. Dudzinski and A. Molinari	369	A modelling of cutting for viscoplastic materials
R. Kitching	391	Pressurised eggshell analysis

L. S. Bayoumi	397	Edge stresses in wide strip hot rolling
L. P. Li, K. Schulgasser and G. Cederbaum	409	Buckling of poroelastic columns with axial diffusion
J. Groß-Weege	417	On the numerical assessment of the safety factor of elastic-plastic structures under variable loading
N. R. Chitkara and M. A. Butt	435	Combined rod and tube extrusion: numerical solution of axi-symmetric slip-line fields and associated velocity fields
C. T. Loy and K. Y. Lam	455	Vibration of cylindrical shells with ring support
S. Murakami and K. Kamiya	473	Constitutive and damage evolution equations of elastic-brittle materials based on irreversible thermodynamics
P. Hu, Y. Q. Liu, Y. X. Li and J. Lian	487	Rigid viscoplastic finite element analysis of the gas-pressure constrained bulging of superplastic circular sheets into cone disk shape dies
Calendar	I	

NUMBER 5

M. J. Jaffar	497	A numerical investigation of the sinusoidal model for elastic layers in line contact
D. Colla, S. B. Petersen and P. A. F. Martins	507	An investigation into the preforming of tubes
Quanfeng Wang and W. Y. Li	523	A closed-form approximate solution of lateral buckling of doubly symmetric thin-walled members considering shear lag
J. E. Taylor	537	Generalized potential formulations for elastostatics of constitutively non-linear structures under general loading
M. J. Silva and L. J. Gibson	549	The effects of non-periodic microstructure and defects on the compressive strength of two-dimensional cellular solids
Y.-S. Lee and S.-Y. Hahm	565	Mechanical property changes in drawing/extrusion of hardening viscoplastic materials with damage
M. Avalle and G. Belingardi	575	Experimental evaluation of the strain field history during plastic progressive folding of aluminium circular tubes
H. Lippmann and R. Iankov	585	Mathematical modeling of sintering during powder forming processes

D. Arola and M. Ramulu	597	Orthogonal cutting of fiber-reinforced composites: a finite element analysis
R. Fortunier, H. Sassoulas and F. Montheillet	615	A thermo-mechanical analysis of stability in dieless wire drawing
Calendar	I	

NUMBER 6

A. J. Black, E. M. Kopalinsky and P. L. B. Oxley	629	Analysis and experimental investigation of a si71mplified burnishing process
T.-D. Park and S. Kyriakides	643	On the performance of integral buckle arrestors for offshore pipelines
B. S. Yilbas	671	Analytical solution for time unsteady laser pulse heating of semi-infinite solid
Ping-Hei Chen, Wen-Cheng Chen and S.-H. Chang	683	Bubble growth and ink ejection process of a thermal ink jet printhead
G. G. Chassie, L. E. Becker and W. L. Cleghorn	697	On the buckling of helical springs under combined compression and torsion
H. P. Cherukuri, R. E. Johnson and R. E. Smelser	705	A rate-dependent model for hot-rolling
Z. Yong and R. Kovacevic	729	Effects of water-mixture film on impact contact in abrasive waterjet machining
Zhaochang Zheng, Gexue Ren and F. W. Williams	741	The eigenvalue problem for damped gyroscopic systems

NUMBER 7

Jyh-Horng Chou, Shinn-Horng Chen, Min-Yung Chang and An-Jia Pan	751	Active robust vibration control of flexible composite beams with parameter perturbations
M. Atkinson	761	Accurate determination of biaxial stress–strain relationships from hydraulic bulging tests of sheet metals
K. Mori, M. Otsu and K. Osakada	771	Distinct element simulation of grain alignment in mushy-state forging of magnets
S. C. Baik, H. N. Han, S. H. Lee, K. H. Oh and D. N. Lee	781	Plastic behaviour of perforated sheets under biaxial stress state
S. M. Powell, D. Kennedy and F. W. Williams	795	Efficient multi-level substructuring with constraints for buckling and vibration analysis of prismatic plate assemblies

Chung-Li Hwan	807	Plane strain extrusion by sequential limit analysis
C. Polizzotto	819	Shakedown of elastic–plastic solids with frictionless unilateral contact boundary conditions
T. X. Yu and L. S. Teh	829	Large plastic deformation of beams of angle-section under symmetric bending
Yuan-Pin Shih and An-Chen Lee	841	Identification of the unbalance distribution in flexible rotors
D. O. Olowokere and D. I. Nwosu	859	Numerical studies on crack growth in a steel tubular T-joint
A. L. Kalamkarov	873	Stress analysis in elastic joint structures

NUMBER 8

T. H. Hyde and W. Sun	885	A method for estimating the stress distributions on the centre line of an axisymmetric, two-material, cross-weld, creep test specimen
R. I. Nepershin	899	Non-isothermal plane plastic flow of a thin layer compressed by flat rigid dies
Y. Tomita, T. Adachi and P. S. Sik	913	Computational simulation of three-dimensional neck propagation in polymeric specimens under tension and hybrid identification of constitutive equation
P. K. Kar and N. S. Das	925	Upper bound analysis of extrusion of I-section bars from square/rectangular billets through square dies
V. D. Potapov and P. Koirala	935	Stability of elastic and viscoelastic systems under action of random stationary narrow-band loads
W. Johnson	943	Penrose's volume: *An Investigation of The Principles of Athenian Architecture*
W. Johnson	957	The students of the "Systematic deviations from ordinary rectilineal construction" in the Athenian Parthenon
Calendar	I	
Announcements	IV	

NUMBER 9

M. D. Xue, X. F. Wang, F. W. Williams and B. Y. Xu	965	Lower-bound shakedown analysis of axisymmetric structures subjected to variable mechanical and thermal loads

J.-B. Han and K. M. Liew	977	Numerical differential quadrature for mindlin plates on two-parameter foundations
D. H. Lam, F. W. Williams and D. Kennedy	991	Critical buckling of stiffened panels with discrete point connections
K. T. Kim, Y. S. Kwon and H. G. Kim	1011	Near-net-shape forming of alumina powder under hot pressing and hot isostatic pressing
L. Wu and J. F. Carney	1023	Initial collapse of braced elliptical tubes under lateral compression
T. C. Tsai and Y. Z. Wang	1037	The vibration of a multi-crack rotor
Y. Kang and Y.-G. Lee	1055	Influence of bearing damping on instability of asymmetric shafts—Part III: disk effects
A. Hachemi and D. Weichert	1067	Application of shakedown theory to damaging inelastic material under mechanical and thermal loads
Obituary	I	
Calendar	III	
Announcements	VII	

NUMBER 10

W. Johnson	1077	Edward Gibbon F.R.S.: Early historical sciences, Maurist erudition and related scholarship, 17th–20th C
D. Lee and A. M. Waas	1117	Stability analysis of a rotating multi-layer annular plate with a stationary frictional follower load
V. Birman	1139	Theory and comparison of the effect of composite and shape memory alloy stiffeners on stability of composite shells and plates
E. Doege and A. Bagaviev	1151	On the analytical modelling of the compacting process of a porous metal ring
S. Wang and D. J. Dawe	1161	Spline finite strip analysis of the buckling and vibration of composite prismatic plate structures
S. Y. Lee, Y. T. Keum, K. Chung, J. M. Park and F. Barlat	1181	Three-dimensional finite-element method simulations of stamping processes for planar anisotropic sheet metals
Calendar	I	
Announcements	V	

NUMBER 11

A. B. Richelsen	1199	Elastic-plastic analysis of the stress and strain distributions in asymmetric rolling
A. Onorati, M. Perotti and S. Rebay	1213	Modelling one-dimensional unsteady flows in ducts: symmetric finite difference schemes versus Galerkin discontinuous finite element methods
U. S. Dixit and P. M. Dixit	1237	Finite-element analysis of flat rolling with inclusion of anisotropy
O. K. Bedair and M. S. Troitsky	1257	A study of the fundamental frequency characteristics of eccentrically and concentrically simply supported stiffened plates
Z. B. Hou and R. Komanduri	1273	Modeling of thermomechanical shear instability in machining
Calendar	I	
Announcements	III	

NUMBER 12

A. R. Akisanya, A. C. F. Cocks and **N. A. Fleck**	1315	The yield behaviour of metal powders
F. Kosel and **C. Jin**	1325	Buckling of a thin annular plate subjected to two opposite locally acting pressures and supported at two opposite points
M. Yoshino and **T. Shirakashi**	1345	Flow-stress equation including effects of strain-rate and temperature history
D. Zhou and **R. H. Wagoner**	1363	An algorithm for improved convergence in forming analysis
Z.-C. Lin and **S.-Y. Lee**	1385	An investigation of contact problem between strip and work roll with a smooth straight surface during cold rolling
S. S. Dey and **V. Tirumala Rao**	1405	Transient response of circular plates and membranes: a numerical approach
P. D. Chinh	1415	Evaluation of shakedown loads for plates
D. W. Lee and **D. Y. Yang**	1423	Consideration of geometric nonlinearity in rigid–plastic finite element formulation of continuum elements for large deformation
Calendar	I	
Announcements	V	
	i	Volume contents and author index